* VZ-LINK *

NEWSLETTER

» AUCKLAND VZ300/200 USERS CLUB «

ISSUE No:14 NOVEMBER 1987

Well,here we are again with another FANTASTIC issue of link.

As some of you who have phoned will know,i had very little voice over the past two week's due to the flu and i am sorry you had trouble understanding me.I seem to be back on my feet now so feel free to ring and talk.
(Before 9 pm please, as i am a shift worker.)

I must also apologize for having to Cancel the meeting on the 8th of november,the reason being that my wife will be in hospital from the 3rd and i have two small boy's to look after.Also i have had three or four call's from members who pointed out that the farmers parade was on that day.

I am now trying to arrange for a date in december (NOTICE TO FOLLOW)

Now on with this issue,which includes :-

Part 3 of understanding your Vz.
Part 4 of Silver mountain (only one part to go folk's)
A new super menu program from scott le brun
A item on converting a speech synthsiser for the VZ.
A review of some of the software sold by laserlink,
written by pete paterson

Thanks to those that have sent items for the newsletter
And to those that have been thinking about it,PLEASE SEND WHAT YOU CAN.
(karen i am still converting the program you sent me)thanks very much
.

I haven't had time to do the round's of the dick smith stores for a couple of months,but i can tell you that the commerce street store has set-up a VZ for hand's on use,and this can only mean more users.
There is still very little software in the stores at the moment,anyone who lives near a store may like to write and tell us any news.

With this issue is the latest list of software and hardware

from laserlink,Australia.

,until the next issue-----ENJOY.

Regards PETER

UNDERSTANDING YOUR VZ. .

When you enter a BASIC word as a string of characters from the keyboard and press RETURN, the BASIC interpreter starts at the beginning of a WORD TABLE in ROM memory which is a complete list of the BASIC WORDS in the numerical order of their tokens. The table begins with END (token 128) and ends with MID$ (token 250). As the interpreter makes its way through the WORD TABLE it keeps a COUNT, starting from 127, and incrementing for every word it encounters in the TABLE. When it finds the word in the TABLE that matches, character for character, the string of characters you input, the interpreter now has the token code (the current COUNT) for that word.

The TABLE begins at address 5712 and ends at address 6175. Each word is listed in the TABLE, character by character, in ASCII code, but the first character of each word is the ASCII code for that character plus 128. When the interpreter encounters a byte greater than 128, it knows that this marks the beginning of a new word (and so COUNT is incremented) and that the current word has ended with the last byte. Most VZ words begin with an alphabetical character; the ASCII code for an alpha character plus 128 is the character code for the inverse of that character. The exceptions are one character words like +, -, =, etc... . But they too are represented by their ASCII character plus 128.

A large number of the locations in the TABLE are reserved for non VZ words, words that were part of the vocabulary of the TRS-80 computer. There is a memory cell set aside for each character for these non VZ words, but the original ASCII character codes have been obliterated. The first character code of such a word has been replaced by the byte 129 (1+128) and all the other character codes have been replaced by zeroes. The consequence of this is that the interpreter is unable to make a match between any of these words that you might try to input into a BASIC line or input as a direct command, and any word in the TABLE.

The word is not recognised as a legitimate vz BASIC word, the token is not derived from COUNT and the word cannot be tokenised in program memory or acted upon as a direct command.

At least twenty-seven of these non VZ words are TRS-80 DOS BASIC WORDS. There are no processing routines in the VZ operating system for these words, so it is just as well that they have been decommissioned.

Three useful words (TRON, TROFF and DEFSTR) have had their places in the TABLE taken over by new VZ words (COPY, COLOR and VERIFY). A further three words (LINE, EDIT and ERROR) have been replaced by CRUN, MODE and SOUND. Given the superior editing facilities of the VZ over those of the old TRS-80, LINE and EDIT are no loss.

But that leaves us with eighteen or so useful words which have been obliterated from the TABLE (though their positions are intact), which have not been replaced with new VZ words, and for which the VZ operating system retains the ability to process and implement. And all that stops the VZ from doing so is its inability to recognise these words and replace them with their tokens. There is no good reason I can think of why these words were decommissioned in the TABLE of the VZ200, nor why they were not recommissioned in the VZ300. the whole problem with these words is getting them into a program in token form. Once they are there they do their jobs. Later in this article we will see how this can be done.

PART 4 NEXT MONTH. . .

SILVER MOUNTAIN - PT 4

```
3350 O$=RIGHT$(O$,LEN(O$)-1):RETURN
3360 PRINT@482,"PRESS <<RETURN>> TO CONTINUE";
3370 Z$=INKEY$:Z$=INKEY$:IFZ$<>CHR$(13),3370ELSERETURN
3380 DIMC(28),E$(80),F(80),X$(6),Y$(6),G$(2)
3390 GOSUB3330
3400 FORI=1TONO:READT$:NEXTI
3410 FORI=1TO6:READX$(I),Y$(I):NEXTI
3420 B$="NOOEOOSOOWOOUOODOOINVGETTAKEXAREAGIVSAYPICWEATIE"
3425 B$=B$+"CLIRIGUSEOPE"
3430 B$=B$+"LIGFILPLAWATSWIEMPENTCROREMFEETURDIVBAILEATHRINSBLO"
3435 B$=B$+"DROEATMOV"
3440 B$=B$+"INTRINCUTHOLBURPOISHOUNLWITDRICOUPAYMAKBRESTEGATREF"
3450 X6$="ZPV SFGMFDUFE UIF XJABSET HMBSF! IF JT EFBE"
3460 X1$="THE GHOST OF THE GOBLIN GUARDIAN"
3470 X2$="B MBSHF WJOF HSPXTJO TFDPOET!"
3480 X3$="A GRARG PATROL APPROACHES"
3490 X4$="MAGIC WORDS LIE AT THE CROSSROADS,THE FOUNTAIN AND "
3495 X4$=X4$+"THE "
3500 X5$="A PILE OF RUBBLE BLOCKS YOUR PATH"
3510 X7$="THE MOUNTAIN RUMBLES!"
3520 X8$="TOWERS FALL DOWN!"
3530 X9$="THE WIZARD HAS YOU IN IS GLARE"
3540 XB$="HE LEADS YOU "
3550 GOSUB4400:PRINT"DO YOU WANT TO"
3560 PRINT:PRINT"   1) START A NEW GAME"
3570 PRINT"OR 2) CONTINUE A SAVED GAME"
3580 PRINT:PRINT:PRINT"TYPE EITHER 1 OR 2"
3590 C$=INKEY$:C$=INKEY$:IFC$<>"1"ANDC$<>"2",3590ELSEC=VAL(C$)
3600 IFC=1,GOSUB4450
3610 IFC=2,GOSUB4600
3620 RETURN
3630 DATA11HALF-DUG GRAVE,12GOBLIN GRAVEYARD
3640 DATA11HOLLOW TOMB,23STALACTITES AND STALAGMITES
3650 DATA11MAZE OF TUNNELS,11VAULTED CAVERN
3660 DATA23HIGH GLASS GATES,12ENTRANCE HALL TO THE PALACE
3670 DATA31GRARG SENTRY POST,12GUARD ROOM
3680 DATA31MARSHY INLET,23RUSTY GATES
3690 DATA12GAMEKEEPER'S COTTAGE,31MISTY POOL
3700 DATA11HIGH-WALLED GARDEN,14INSCRIBED CAVERN
3710 DATA34ORNATE FOUNTAIN,11DANK CORRIDOR
3720 DATA12LONG GALLERY,12KITCHENS OF THE PALACE
3730 DATA34OLD KILN,44OVERGROWN TRACK
3740 DATA31DISUSED WATERWHEEL,33SLUICE GATES
3750 DATA11GAP BETWEEN SOME BOULDERS,41PERILOUS PATH
3760 DATA31SILVER BELL IN THE ROCK,12DUNGEONS OF THE PALACE
3770 DATA11BANQUETING HALL,42PALACE BATTLEMENTS
3780 DATA44ISLAND SHORE,31BEACHED KETCH
3790 DATA13BARREN COUNTRYSIDE,33SACKS ON THE UPPER FLOOR
3800 DATA46FROZEN POND,21MOUNTAIN HUT
3810 DATA31ROW OF CASKS,11WINE CELLAR
3820 DATA12HALL OF TAPESTRIES,11DUSTY LIBRARY
3830 DATA13ROUGH WATER,11PLOUGHED FIELD
3840 DATA55OUTSIDE A WINDMILL,42LOWER FLOOR OF THE MILL
3850 DATA44ICY PATH,41SCREE SLOPE
3860 DATA12SILVER CHAMBER,12WIZARD'S LAIR
3870 DATA11MOSAIC-FLOORED HALL,12SILVER THRONE ROOM
3880 DATA12MIDDLE- OF THE LAKE,42EDGE OF AN ICY LAKE
3890 DATA41PITTED TRACK,41HIGH PINNACLE
3900 DATA55ABOVE A GLACIER,21HUGE FALLEN OAK
3910 DATA11TURRET ROOM WITH A SLOT MACHINE,11COBWEBBY ROOM
3920 DATA31SAFE IN OGBAN'S CHAMBER,31CUPBOARD IN A CORNER
3930 DATA11NARROW PASSAGE,16CAVE
```

```
3940 DATA11WOODMAN'S HUT,42SIDE OF A WOODED VALLEY
3950 DATA21STREAM IN A VALLEY BOTTOM,11DEEP DARK WOOD
3960 DATA11SHADY HOLLOW,34ANCIENT STONE CIRCLE
3970 DATA16STABLE,14ATTIC BEDROOM
3980 DATA11DAMP WELL BOTTOM,32TOP OF DEEP WELL
3990 DATA31BURNT-OUT CAMPFIRE,16ORCHARD
4000 DATA62END OF A BRIDGE,62END OF A BRIDGE
4010 DATA61CROSSROADS,41WINDING ROAD
4020 DATA11VILLAGE OF RUSTIC HOUSES,11WHITE COTTAGE
4030 DATA3COINS,1SHEET,3BOOTS,1HORSESHOE,3APPLES,1BUCKET,4AXE
4035 DATA1BOAT,1PHIAL
4040 DATA3REEDS,1BONE,1SHIELD,3PLANKS,1ROPE,1RING,1JUG,1NET
4045 DATA1SWORD
4050 DATA1SILVER PLATE,1UNIFORM,1KEY,3SEEDS,1LAMP,3BREAD,1BROOCH
4055 DATA3MATCHES
4060 DATA2STONE OF DESTINY,4APLLE,BED,CUPBOARD,BRIDGE,TREES
4065 DATASAIL,KILN
4070 DATAKETCH,BRICKS,WINDMILL,SACKS,OGBAN'S BOAR,WHEEL
4080 DATAPONY,GRAVESTONES,POOL,GATES,HANDLE,HUT,VINE
4085 DATAINSCRIPTIONS,TROLL,RUBBLE
4090 DATAHOUND,FOUNTAIN,CIRCLE,MOSAICS,BOOKS,CASKS,WELL,WALLS
4095 DATARATS,SAFE
4100 DATACOBWEBS,COIN,BELL,UP SILVER PLATE,STONES,KITCHENS
4105 DATAGOBLET,WINE
4110 DATAGRARGS,DOOR,AWAKE,GUIDE,PROTECT,LEAD,HELP,CHEST,WATER
4120 DATASTABLES,SLUICE GATES,POT,STATUE,PINNACLE,MUSIC
4125 DATAMAGIC WORDS
4130 DATAMISTY POOL,WELL BOTTOM,OLD LIKN,MOUNTAIN HUT
4140 DATA IN,A,NEAR,THE,BY,SOME,ON,AN,"","",AT,A SMALL
4150 DATA E,ESW,WE,EW,EW,ESW,ESW,ES,EW,SW
4160 DATA S,N,ES,SW,S,NW,N,N,ES,NSW
4170 DATA NS,E,NSW,N,NES,EW,W,S,NS,N
4180 DATA NES,W,NS,D,NES,SW,E,NW,NS,S
4190 DATA NS,E,NSEW,WU,UD,NS,E,SW,NSE,NW
4200 DATA NE,EW,NSW,E,WN,S,E,NEW,NW,S
4210 DATA ES,SW,NES,EW,SW,NE,EW,ESW,SW,ND
4220 DATA " ",E,NEW,EW,NEW,EW,EW,NEW,NEW,WU
4230 DATA80,70,60,69,74,72,63,52,20,11,1,14,36,54,61,21,32,10,50
4240 DATA 29,59,34,13,80,30,81,47,74
4250 DATA 1,2,3,4,5,9,12,13,16,17,20,21,22
4260 Z$="":FORI=1TOLEN(R$)
4270 C$=MID$(R$,I,1):IFC$<"A",Z$=Z$+C$:GOTO4300
4280 C=ASC(C$)-1:IFC=64,C=90
4290 Z$=Z$+CHR$(C)
4300 NEXTI:R$=Z$:RETURN
4310 J$="SSSSSSSS":NG=0
4320 MP=D/2:GOSUB4400
4330 PRINT"YOU ARE LOST IN THE":PRINT"     TUNNELS"
4340 PRINT"WHICH WAY? (N,S,W OR E)"
4350 IFNG>15,PRINT"(OR G TO GIVE UP!)"
4360 PRINT:INPUTW$:J$=RIGHT$(J$+RIGHT$(W$,1),8)
4370 IFW$="G",F(56)=1:RETURN
4380 IFJ$<>G$(MP),NG=NG+1:GOTO4320
4390 RETURN
4400 CLS
4410 PRINT"        MYSTERY OF SILVER
4420 PRINT"             MOUNTAIN
4430 PRINT"================================";
4440 PRINT:RETURN
4450 FORI=1TO80:READE$(I):NEXTI
4460 FORI=1TOG:READC(I):NEXTI
4470 FORI=1TO13:READA:F(A)=1:NEXTI
4480 F(41)=RND(900)+99:F(42)=RND(3)+1
4490 F(44)=4:F(57)=68:F(58)=54:F(59)=15:F(52)=RND(2)
4500 R=77:R$="GOOD LUCK ON YOUR QUEST!"
```

SUPER DISK MENU
BY SCOTT LE BRUN

Not another disk menu? I hear you ask. Yes. But this one is uniquely different.

The problem with conventional disk menues is that they have to be physicaly modified to suit each different disk that you want to use it for. You have to change around RUN"XXXXXX" & BRUN"XXXXXX" and so on.

But not with SUPER DISK MENU. This program, when updated from a single push of a key, reads what is on the disk and then it MODIFIES ITSELF to suit the various programs on the disk.

HOW IT WORKS:- When the UPDATE option is selected, it reads the directory and prints it on the screen. It then uses <PEEK>s & <POKE>s to copy what is printed on the screen into <DATA> statements located near the start of the program.

Once the program is listed, you can see that the directory of the disk is now actually located within the program itself.

Once <RUN>, it <READ>s the <DATA> statements into an array of strings and prints the strings onto the screen alongside a number which when pressed, selects that particular program for loading.

Lines 220 & 222 check to see whether the filename read from the <DATA> statements is suitable for loading. Only <T>ext or <B>inary files can be loaded. If it detects a <D>ata or <W> file. It ignores them and proceeds to the next file. If it finds a <A> or <space>, it takes this as the end of the list of files.

Once a file has been selected, it then <POKE>s in the token corresponding to the necessary command:- RUN or BRUN. It then copies the file's name after it and encloses the filename with inverted commas <">. After this is done, it then just executes a <GOTO> instruction which makes it jump to the line where the RUN, BRUN command was poked, which it executes, loading in your program.

The <BRUN> command consists of ASCII 66 & 142. Which are B & RUN put together, instead of a single ASCII number. Since this takes up an extra byte, the <RUN> command will be a bit shorter and an overlap will occur. To get around this, the program <POKE>s in a colon <:> before the <RUN> statement.

WARNING:- Don't alter lines 10 to 115 (or insert lines in between) or the program will crash.

To use the SUPER DISK MENU. Just type in the program and <SAVE> it to disk (For a backup). Now run the program, select the UPDATE option and insert the disk that you wish the MENU to be on. (Make sure that a file exists on the disk called "MENU".) Just follow the prompts and it will <SAVE> itself to disk.

If MENU doesn't exist of the disk, then press <CRTL+BREAK> and type <SAVE"MENU"> and press <RETURN>.

The program can only store 15 filenames in it's DATA statements. If more than 15 files exist on the disk, it will take the last 15. To allow more files, put MENU as the first file, as you don't need to load it. Any files that you don't use often put near the start also.

To change from disk to disk, just load the MENU from one disk and select the UPDATE option and then insert the next disk and it will adjust itself accordingly.

If you find yourself in strife, just write to me explaining the problem and I'll see what I can do.

I'm sure you'll find this MENU to be extremely useful. I know that I do!

```
10 REM SUPER MENU
20 REM BY SCOTT LE BRUN
30 REM VZ DOWN UNDER
40 REM AUGUST 1987
50 GOTO120
60 DATA AAAAAAAAAA,AAAAAAAAAA,AAAAAAAAAA,AAAAAAAAAA,AAAAAAAAAA
70 DATA AAAAAAAAAA,AAAAAAAAAA,AAAAAAAAAA,AAAAAAAAAA,AAAAAAAAAA
80 DATA AAAAAAAAAA,AAAAAAAAAA,AAAAAAAAAA,AAAAAAAAAA,AAAAAAAAAA
90 DATA AAAAAAAAAA
100 :RUN"AAAAAAAA":
110 STOP
115 DATA AAAAAAAAAA
120 CLEAR100:DIMA$(16)
130 CLS:POKE30777,1:COLOR4
140 PRINT"[illegible]";:REM 32 SHIFT+J
150 PRINT"[illegible]";
160 PRINT"[illegible]";:REM 32 SHIFT+J
170 FORI=1TO12:PRINT"[illegible]";:NEXT
175 REM ABOVE LINE- 1 SHIFT+J, 30 SPACES, 1 SHIFT+J
180 PRINT@480,"[illegible]";:REM 31 SHIFT+J
190 POKE29183,191
200 D=0:FORT=0TO1
210 FORI=1TO8
215 READA$:A$(I+T*8)=A$:L$=LEFT$(A$,1)
220 IFL$="T"ORL$="B",240
222 IFL$="D"ORL$="W",215
228 IFD=0,I1=I:T1=T:D=1
230 GOTO270
240 P$=RIGHT$(A$,LEN(A$)-2)
250 IFT=1ANDI=1,PRINT@98+I*32+T*14,I+T*8")- "P$:GOTO270
260 PRINT@97+I*32+T*14,I+T*8")- "P$
270 NEXT
280 NEXT
290 A=I1+T1*8:PRINT@97+I1*32+T1*14,A")- [illegible]"
300 POKE30777,35
310 PRINT@418,"YOUR SELECTION";:INPUTB$:B$=LEFT$(B$,LEN(B$)-1)
320 B=VAL(B$)
330 IFB<1ORB>A,310
340 IFB=A,440ELSEPRINT@481,"                                    ";
350 PRINT@481,"[illegible]";A$(B);
360 L=31757:P$=RIGHT$(A$(B),LEN(A$(B))-2)
370 IFLEFT$(A$(B),1)="B",POKEL,66:L=L+1ELSEPOKEL+11,58
380 POKEL,142:POKEL+1,34
390 FORX=1TO8:L$=MID$(P$,X,1):LL=ASC(L$):IFLL>92,LL=LL-64
400 POKE(L+1+X),LL:NEXT
410 POKEL+10,34
420 GOTO100
430 GOTO430
440 CLS:PRINT@3,"[illegible]";
450 A$=INKEY$:A$=INKEY$:IFA$="",450ELSECLS:DIR
460 NF=0:FORI=0TO14:P=28672+I*32
480 NEXT
490 FORN=0TO4
510 FORI=0TO9
520 POKE31558+I+N*11,PEEK(28672+I+N*32)
530 NEXT
540 NEXT
550 FORN=0TO4
570 FORI=0TO9
580 POKE31619+I+N*11,PEEK(28672+I+32*5+N*32)
590 NEXT
600 NEXT
610 FORN=0TO4
630 FORI=0TO9
640 POKE31680+I+N*11,PEEK(28672+I+32*10+N*32)
```

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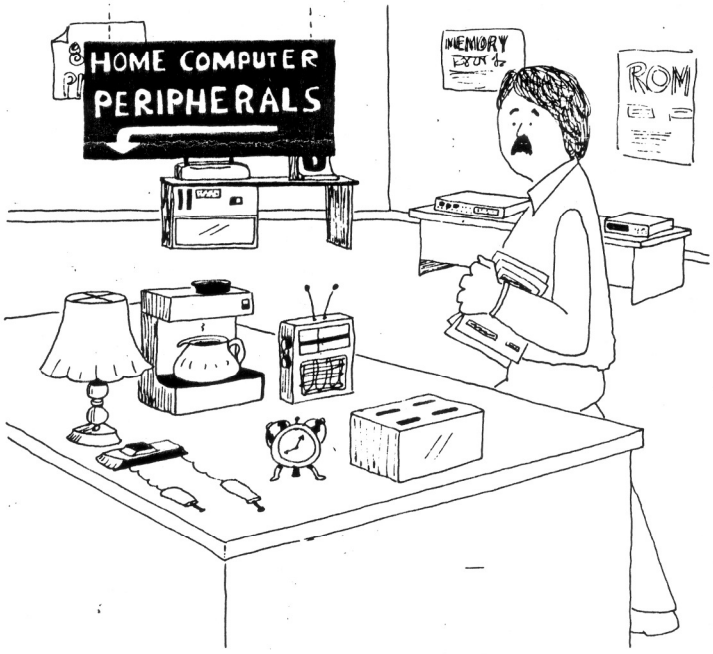
```
650 NEXT
660 NEXT
665 PRINT@488,"SAVE MENU (Y/N)";
667 A$=INKEY$:A$=INKEY$:IFA$<>"Y"ANDA$<>"N",667
669 IFA$="N",RUN
670 PRINT@482,"PREPARE DISK FOR SAVING MENU";
680 A$=INKEY$:A$=INKEY$:IFA$="",680
690 ERA"MENU":SAVE"MENU"
700 PRINT@480,"DONE PRESS ANY KEY TO RUN";
710 A$=INKEY$:A$=INKEY$:IFA$="",710ELSERUN
```

CHANGE OF ADDRESS

VZ DOWN UNDER
C/- SCOTT LE BRUN
59 BRENTWOOD DRIVE
WANTIRNA 3152
VICTORIA



CORRECTION TO DOS MANUAL

On page 60 of the dos manual the example should read.

```
10 OPEN "DATA",1
20 PR#"DATA",120,"TABLE 1",200,"TABLE 2"
30 CLOSE"DATA"
```

The IN# command must be arranged as

```
100 OPEN"DATA",0
120 IN#"DATA",A,A$,B,B$
130 CLOSE"DATA"
```

REVIEW OF LASERLINKS "DISKMENU/FASTDISK" SOFTWARE

By Pete Patterson

Both these utilities are on one disk and give disk drive owners quicker program manipulation.

DISKMENU is loaded on each disk and by typing RUN"#" the program lists the disk's directory allowing you to load or run a program on the disk with a single key stroke. It doesn't matter if the program is in Binary or Basic.

A very handy program.

FASTDISK. This utility initialises a disk differently from the standard disk DOS.The disk is still compatible for saving VZ programs but increases the speed of loading and saving programs.

A couple of examples are: LEARJET. To load from disk VZ DOS 26sec. To load from Initialised FASTDISK 18sec. MYSTERY OF SILVER MOUNTAIN. To load from VZ DOS 22sec. Initialised FASTDISK 15sec. A utility worth having if you are making full use of the VZED with memory expansion.

A niggle though with the LASERLINK Software. Other than the DISKMENU program,all the programs I have purchased from them have been'protected'not allowing you to make backup working copies.Tough if you screw the disk up.

SPEECH SYNTH. .

AEM 4505 and the VZ 200/300

Notes to Date (22-3-87)

Refer to June and July 1986 AEM.

1> Jumpers for USER selectable options
Links U,V,W & X 'should be made'.

2> The I/O Select Link should be made as indicated by the Dotted Line. i.e. Pin 11 of IC5 to be joined to the Junction of IC11 pins 8 & 11.

3> All IC's including the 6116 Ram, EXCEPT for IC's 1,2,3 & 9 to be installed.

4> RV1 - the Volume control. Use a Panel mount 10K ohm Lin pot.
Dick Smiths R-1806 or R-6806.
Reset sw - D.S.E S-1198.
Install Socketts UNDER ALL IC's.

5> Locate the 'PARALLEL PORT' on the top picture on page 88 of AEM June 1986. This picture is the Component Overlay. The P.Port is next to the 'Fingers' which plug into an IBM/Clone. The figure A1 refers only to the Fingers.
The P.Port is numbered 1 to 13. The Front Row of pins (nearest the fingers) carry the Signals and match up with the Centronic/Parallel Port numbers on the VZ Printer Interface Plug.
The GND (earth) can be connected to pin B10 or pin B31 of the IBM fingers (it also appears on pin xx (I cannot tell from the pictures) of the P.Port). You will be able to find which Pin when You buy your P.C.Board, See also fig.3 and Table 2 on page 52 of JULY '86 AEM.

Routine to make the unit Talk.

```
100 A$="HELLO-THERE"
110 REM WHERE A$ is to be output to the Speech Synthsiser
120 GOSUB 15020 :REM OR GOTO
```

This is the sub-routine to be used -:

```
15010 REM - IN USE -> A$, A and T
15020 FOR T=1 TO LEN(A$)
15030 A=ASC(MID$(A$,T,1))
15040 OUT12,A :REM OUT13,0 MAY BE NECESSARY AS WELL
15050 NEXT
15060 LPRINT:LPRINT:REM THESE MUST BE HERE
15070 RETURN :REM OR GOTO 0000 - CONTINUE ON
```

Make A$ equal to any String to be output to the Speech Synthsiser.

USE HYPHENS between words, this helps the Speech flow evenly.
2 Hyphens (or more) will slow the Speech down.
Commas have a pausing effect as well.
A (.) Period will make the Speech Pause between words (long pause). 2 Periods (..) will pause even longer.

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SPEECH SYNTH..CONTINUED:;

Examples

```
10 A$ ="DOGGY.WFFWFF-WFF-WFFWFF-RFF"
20 A$= "STEAM-TRAIN.SHSHSHSHSHSS, TOOT-TOOT,SHSHSH"
30 A$= "WHISPERING.SHSH.SH.. SH-SH-SH-SHSHSH-SH-SHSHSH"
40 A$= "MACHINE-GUN.GGGGGGGGGGGGGGGG GGGGGGGGGGGG"
```

When entering the code between the Quote marks, leave out the Spaces.
These Spaces are caused by the way that the Word Processor accepts Lines that contain a Line Number.

A suit of PUBLIC DOMAIN Programs for the AEM4505 to RUN on the VZ200/300 are available from the H.V.V.Z.U.G or myself.
The Printer Interface is used for Interfacing to the Speech Synth.
A suitable Power Supply such as the Datasette or Plotter should be used to power the Speech Synth.

NOTES.

The SPO-256-AL2 chip , LM386 Amplifier chip , the 7805 REGulator and the Interconnecting cable with Centronic's Sockett can be removed from my Speech Synth and used in this (AEM4505) Speech Synthsiser.
I also suggest that the Volume control be mounted 'OFF' the Circuit board and ON the front of the Case that you are using.

In the next Magazine I will show how to incorporate Tone controls as used on my Original Speech Synth. This is relatively easy.

DAVE BOYCE
41 HEATHER DRIVE
CHRISTIE DOWNS 5164
South Aust.

Cover Note - I wrote to AEM some time ago (about 2 months) requesting permission to use 'Parts of' their Diagrams.
I haven't heard back from them ??
Considering that if you buy Your CTS chip from tandy's like I did, You will see that the diagrams supplied with their chip are for all Intents and Purposes the same as AEM's.

P.O BOX 1972 C.P.O AUCKLAND N.Z

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